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16  
17 **UNITED STATES DISTRICT COURT**  
18 **DISTRICT OF NEVADA**

19 Cung Le, Nathan Quarry, Jon Fitch, Brandon  
20 Vera, Luis Javier Vazquez, and Kyle  
21 Kingsbury, on behalf of themselves and all  
others similarly situated,

22 Plaintiffs,

23 v.

24 Zuffa, LLC, d/b/a Ultimate Fighting  
Championship and UFC,

25 Defendant.  
26  
27  
28

Case No.: 2:15-cv-01045-RFB-BNW

**DECLARATION OF DR. JOSHUA  
LUSTIG IN SUPPORT OF DEFENDANT  
ZUFFA, LLC'S OPPOSITION TO  
PLAINTIFFS' OBJECTIONS TO  
DEFENDANT ZUFFA, LLC'S  
PROPOSAL TO INTRODUCE CERTAIN  
PURPORTED "SUMMARY EXHIBITS"  
AT THE HEARING CONCERNING  
PLAINTIFFS' MOTION FOR CLASS  
CERTIFICATION**

1 I, Joshua D. Lustig, declare as follows:

2 1. I am a Principal in the firm Charles River Associates (“CRA”). I hold a Ph.D. in  
3 economics from Yale University. I have been retained by Defendant Zuffa, LLC (“Zuffa”) to assist  
4 Zuffa in this litigation.

5 2. I make this declaration in support of Defendant Zuffa, LLC’s Opposition to  
6 Plaintiffs’ Objections to Defendant Zuffa, LLC’s Proposal to Introduce Certain Purported  
7 “Summary Exhibits” at the Hearing Concerning Plaintiffs’ Motion for Class Certification. Based on  
8 my personal experience, knowledge, and review of the files, records, and communications in this  
9 case, I have personal knowledge of the facts set forth in this Declaration and, if called to testify,  
10 could and would testify competently to those facts under oath.

11 3. I will be available to testify in person at the scheduled evidentiary hearings on class  
12 certification in this matter that are scheduled to occur from August 26 to August 30, 2019. If the  
13 Court schedules a hearing in advance of the August 26 to August 30, 2019 evidentiary hearings, I  
14 will also be available to testify.

15 4. As part of my work for Zuffa in this matter, I supervised the creation and assembly  
16 of certain of the summary exhibits to which Plaintiffs have objected in their Objections to  
17 Defendant Zuffa, LLC’s Proposal to Introduce Certain Purported “Summary Exhibits” at the  
18 Hearing Concerning Plaintiffs’ Motion for Class Certification (“Plaintiffs’ Objections”). I did so at  
19 the direction of counsel for Zuffa.

20 5. I have also reviewed each of the other summary exhibits and the backup materials to  
21 those exhibits to which Plaintiffs have objected in their Objections. As a result of studying the  
22 remaining exhibits and backup materials, I am personally familiar with how each summary exhibit  
23 was created and, if called to testify, could and would testify competently to the creation of those  
24 summary exhibits under oath.

25 6. I have inspected and reviewed all four expert reports submitted by Dr. Singer and the  
26 backup materials to those reports provided by Dr. Singer. I am personally familiar with the contents  
27 of those reports and backup materials.

1           7.       In summary, I am personally familiar with how all of the summary exhibits to which  
2 Plaintiffs object (and the backup files underlying those exhibits) were created and, if called to  
3 testify, could and would testify competently to the creation of those summary exhibits under oath.

4           8.       As part of the backup materials to his first report, Dr. Singer included a number of  
5 .do files (known as “Do Files”) that are compatible with the commercially available statistical  
6 program Stata. These .do files allowed myself and others at CRA to recreate the datasets and  
7 analyses that appeared in Dr. Singer’s first report, including the exact data set that he used to run his  
8 impact regressions. This dataset was named “Regression Data.dta,” which is a type of database file  
9 that is compatible with Stata. I am personally familiar with the contents, structure, and set up of the  
10 “Regression Data” file.

11           9.       According to the description of Dr. Singer’s “Regression Data” file in Stata, the file  
12 contains 9,477 observations and 544 variables before running the Do Files that produce Dr. Singer’s  
13 impact regressions. This means that there may be a total of over 5.1 million individual fields of  
14 information. For example, for a single athlete-bout in Dr. Singer’s “Regression Data” set, there are  
15 544 fields that may have values. The “Regression Data” file is over 45 megabytes in size.

16           10.      As part of the backup files to his first report, Dr. Singer also included files that were  
17 used to create a file called “Sherdog Denom for Market Shares.dta,” which he used in his analysis.  
18 I am personally familiar with the contents, structure, and set up of the “Sherdog Denom for Market  
19 Shares” file. The “Sherdog Denom for Market Shares.dta” file has 547,759 observations, 134  
20 variables, and is 1.1 Gigabytes in size.

21           11.      For ease of reference, in referring to each of the summary exhibits to which Plaintiffs  
22 have objected, I use the designations Plaintiffs used in their Objections brief. For example, for  
23 Zuffa Summary Exhibit 1, I use the name “SE1” and for Exhibit 87 to Zuffa’s Opposition to Class  
24 Certification, I use “COE87.” Exhibit 4 to this Declaration, which is described below, contains a  
25 full list of the names (and exhibit list numbers) I use in the “Zuffa Summary Ex.” column.

26           12.      Exhibit 2 to this Declaration is a chart listing the summary exhibits to which  
27 Plaintiffs have objected in their Objections to Defendant Zuffa, LLC's Proposal to Introduce Certain  
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Purported “Summary Exhibits” at the Hearing Concerning Plaintiffs’ Motion for Class Certification (“Plaintiffs’ Objections”). The chart accurately summarizes the basic data and arithmetic operations used to generate each of the listed summary exhibits. These basic operations are limited, in the generation of the summary exhibits below, to addition, multiplication, subtraction, and division as well as basic mathematical concepts like averages as expressed as means and medians. No new regressions were run to create any summary exhibit in Exhibit 2.

13. Exhibit 3 to this Declaration is an excerpt from Dr. Singer’s “Regression Data” file of all information from the event named “UFC 192 Cormier vs. Gustafsson” that is included or derived from Dr. Singer’s data set. In this excerpt, each row of data represents one variable from Dr. Singer’s “Regression Data” file and the excerpt contains true and correct information extracted from Dr. Singer’s data set.

14. Exhibit 4 to this Declaration lists each summary exhibit to which Plaintiffs object and accurately summarizes the materials underlying each listed summary exhibit. Exhibit 4 also accurately describes the general type of way in which the data underlying the summary exhibit is displayed.

15. Exhibit 5 is a true and correct copy of a printout of a file, “15\_Core\_Regs\_Plus\_Damages.do” from Dr. Singer’s backup files served on Zuffa with Dr. Singer’s first expert report. This file was used to run regressions that were included and described in Dr. Singer’s first report, including regressions designed to assess, in Dr. Singer’s view, whether common impact occurred within the parameters of his regression. One example of the Stata code used to run one of Dr. Singer’s impact regressions is contained on line number 144. That line contains the command “xtreg pay\_ratio FS\_alt1 \$varlist, fe robust” and is the command that underlies one of his impact regressions for his Ranked Market. The \$varlist global macro contains a number of variables that are defined earlier in the Stata code file. For example, among the variables from Dr. Singer’s dataset that are included in the \$varlist global macro and therefore included among Dr. Singer’s independent or right-hand side variables in his impact regressions are the variables for year fixed effects, which are shown on line number 108 as

1 i . year and his time trend variable (trend), which is listed on line number 109, both of which  
2 are included in each of his impact regressions. By way of example, Dr. Singer's independent  
3 variables also include other controls such as data from the commercial service FightMetric™ as  
4 listed on line numbers 77 through 79 and 109 under the global macro \$FM\_data.

5 16. I have carefully examined Exhibit 5. Dr. Singer does not include a variable called  
6 "broadcast" (or any modifications of "broadcast") in the regressions estimated in that file.  
7 The "broadcast" variable, according to his "Regression Data" file, has a variable label  
8 "Broadcaster of Event" and takes on various values including "FIGHT PASS," "FOX," "FS1,"  
9 "FS2," "FUEL," "FX," "PPV," "SHOWTIME," "SPIKE," and "VERSUS" for each of the 6,942  
10 Zuffa observations included in his regression. The "broadcast" variable is blank or missing for  
11 only 212 pre-acquisition Strikeforce observations in his data set that are included in his impact  
12 regression (2.96% of the total number of observations).

13 17. Exhibit 6 is a true and correct copy of a printout of a backup file that was provided to  
14 Plaintiffs that underlies SE1, SE3, and SE7. There are no new regressions that were run in order to  
15 assemble those summary exhibits. For example, line number 159 of Exhibit 6 contains the exact  
16 same command "xtreg pay\_ratio FS\_alt1 \$varlist, fe robust" as in Dr.  
17 Singer's backup file and was used solely for the purpose of limiting the observations in the SE1  
18 summary exhibit to those observations considered in Dr. Singer's impact regression for his Ranked  
19 Market. The command on line number 160 immediately following that regression command,  
20 "keep if e(sample)" is an instruction to Stata to keep only those observations actually used  
21 in the regression initiated by the command in line number 159.

22 18. Exhibit 11 to this Declaration is an excerpt from Dr. Singer's "Sherdog Denom for  
23 Market Shares.dta" file of all information from the event named "UFC 192 Cormier vs. Gustafsson"  
24 that is included or derived from Dr. Singer's backup materials. In this excerpt, each row of data  
25 represents one variable from Dr. Singer's "Sherdog Denom for Market Shares.dta" file and the  
26 excerpt contains true and correct information extracted from Dr. Singer's data set.

1           19. As examples, Exhibits 12 through 16 are true and correct copies of printouts of  
2 backup files that were provided to Plaintiffs that were used to generate summary exhibits SE2, SE5,  
3 SE6, SE10, SE12, and SE13.

4           20. For all of the Zuffa summary exhibits described in the paragraphs below, I  
5 understand that Plaintiffs have been provided with backup files where appropriate and are in  
6 possession of the underlying data from Dr. Singer (the “Regression Data” or other specified data  
7 file) from his backup files and can examine and replicate this summary exhibit if they choose to do  
8 so.

9           21. Zuffa summary exhibit SE1 is a scatterplot that summarizes 212 pre-acquisition  
10 Strikeforce bouts and 202 post-acquisition Strikeforce bouts included in Dr. Singer’s impact  
11 regression. The summary exhibit accurately summarizes this voluminous information and the text  
12 boxes in the graph accurately describe the average (mean) percentages of event revenues athletes  
13 were paid in pre-acquisition bouts (indicated by the blue dots) and post-acquisition bouts (indicated  
14 by the orange dots) separately.

15           22. Zuffa summary exhibit SE2 is a set of two bar charts that accurately summarizes two  
16 voluminous subsets of information from Dr. Singer’s “Regression Data” from his backup files.  
17 These subsets of information are average (mean) athlete compensation for Zuffa athletes, subject to  
18 the items listed in the “Notes” field on each page, by gender and weight class, for the time periods  
19 2005 through 2016 and 2011 through 2016. The vertical axes on both bar charts are mathematically  
20 accurate and were created using the Microsoft Excel default option of allowing the highest bar in a  
21 bar chart to reach up to but not touch the highest y-axis labeled value.

22           23. Zuffa summary exhibit SE3 is an accurate summary of voluminous information from  
23 Dr. Singer’s backup data and specifically his “Regression Data” file. Exhibit 6 was the backup  
24 information provided to Plaintiffs that contains all Stata code used to generate the exhibit. As is  
25 readily apparent from Exhibit 6, the backup file to this exhibit, the data used for this summary  
26 exhibit comes only from Dr. Singer’s “Regression Data” and values and numbers that are generated  
27 by the exact same regression (as listed on line number 181) that is in Dr. Singer’s  
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1 “15\_Core\_Regs\_Plus\_Damages.do” file. I did not use any data from any source other than Dr.  
2 Singer’s data and I used values for the line graph that were generated only from running Dr.  
3 Singer’s impact regression as specified in the backup file.

4 24. The first page of exhibit SE3 contains a summary of voluminous information that  
5 was extracted from averages of Dr. Singer’s Fighter Share variable (`pay_ratio`) from his  
6 Regression Data set as well as revenue-weighted foreclosure shares from his Ranked and Tracked  
7 markets that were included in his Regression Data set from his variables `FS` and `FS_alt1`. In  
8 creating this summary exhibit, I took the steps described in the “Notes” field as well as detailed in  
9 the backup file to this exhibit, which included subtraction and the calculation of averages (means)  
10 of values provided from Dr. Singer’s own data and regression (and no other source).

11 25. The second page of exhibit SE3 is a line graph that summarizes information from the  
12 first page with further description of the graph in the “Notes” field on that same page that accurately  
13 summarizes averages calculated from Dr. Singer’s voluminous Regression Data set in Dr. Singer’s  
14 Tracked Market as defined on the graph.

15 26. The third page of exhibit SE3 is a line graph that summarizes information from the  
16 first page with further description of the graph in the “Notes” field on that same page that accurately  
17 summarizes averages calculated from Dr. Singer’s voluminous Regression Data set in Dr. Singer’s  
18 Ranked Market as defined on the graph.

19 27. The fourth page of exhibit SE3 is a line graph with further description of the graph in  
20 the “Notes” field on that same page that uses values generated from the voluminous information  
21 generated from Dr. Singer’s regression and his Regression Data set. The line graph accurately  
22 summarizes the data described on that page in the way described on that page.

23 28. Dual-vertical axes are commonplace in economics, particularly when comparing two  
24 variables with different values. So long as properly labeled, which SE3 is, dual-vertical axes are  
25 very useful, accurate, and make otherwise difficult comparisons easy.



29. Zuffa summary exhibit SE6 is a set of three tables that accurately summarizes the voluminous data in Dr. Singer's "Regression Data" file with the limitations described in the "Notes" on each page of the summary exhibit.

30. Zuffa summary exhibit SE7 is a set of two series of bar charts listing "wage share" that accurately summarizes the voluminous information in Dr. Singer's "Regression Data" set with simple descriptive information described in the "Note" field and in a single text box that describes (but does nothing else) when Zuffa acquired Strikeforce and lists the average wage share at pre-acquisition and post-acquisition Strikeforce, listed separately. Data from the website Sherdog.com was used to determine which Strikeforce events featured amateur MMA athletes. The second page is an accurate summary of that voluminous public information which would be difficult and inconvenient to examine in its original forms.

31. Zuffa summary exhibit SE10 is two pages of average event costs as displayed in a simple bar chart by type of event over two different time periods as determined by the type of broadcast, for example, Zuffa's FightPass product versus Fox versus a pay-per-view event. This summary exhibit accurately describes and summarizes the voluminous information contained in backup materials to Dr. Singer's fourth report. The types of broadcasts listed are derived directly from the "Broadcast" variable in Dr. Singer's regression data.

32. Zuffa summary exhibit SE11 is an accurate listing of annual production costs for the show The Ultimate Fighter ("TUF"), as described in the "Notes" section of the summary exhibit, that accurately summarize information taken from large spreadsheets enumerated in the "Source" notes on the exhibit that were financial documents produced in Microsoft Excel format and included in Dr. Singer's backup materials. The years 2010 and 2012 are missing from this summary exhibit because I and others were unable to find a clearly defined field that separately and clearly broke out the production costs for TUF.

33. Zuffa summary exhibit SE12 is a series of bar charts that accurately summarize the voluminous information, subject to the "Notes" field on each chart, contained in Dr. Singer's "Regression Data" file. This summary exhibit accurately summarizes the average (mean and



1 median) event compensation, wage share, and fighter share by type of broadcast and time period as  
2 specified in each chart. The types of broadcasts listed are derived directly from the “broadcast”  
3 variable in Dr. Singer’s regression data.

4 34. Zuffa summary exhibits COE87 through COE89 are accurate summaries of the  
5 voluminous data on compensation, for different subsets of his data as specified in those exhibits,  
6 from his “Regression Data” file. The histograms used to generate these summary exhibits are  
7 accurate and simple representations of the number of athlete-bouts for which each level of  
8 compensation was paid.

9 35. Zuffa summary exhibits SJE87, SJE96, SJE97, SJE98, SJE99, SJE114, SJE124,  
10 SJE128, and SJE131 are accurate summaries of Dr. Singer’s “Sherdog Denom for Market  
11 Shares.dta” data file, which is a voluminous file.

12 36. Exhibit 17 to this Declaration is an excerpt of all information from the event named  
13 “UFC 192 Cormier vs. Gustafsson” from Dr. Singer’s “Regression Data” data set included with his  
14 backup files . This excerpt, which is a PDF formatted printout of a Microsoft Excel file, was  
15 generated from running lines 1 through 139 from Dr. Singer’s  
16 “15\_Core\_Regs\_Plus\_Damages.do” file from Dr. Singer’s backup files served on Zuffa  
17 with Dr. Singer’s first expert report and running two additional Stata commands, which exported  
18 the subset of data described above accurately and without alteration, “keep if  
19 eventid==‘UFC 192’” and “export excel using ‘\$output\Raw Singer  
20 Regression Data Extract - UFC 192.xlsx’, firstrow(variables)  
21 replace”.

1 I declare under penalty of perjury under the laws of the United States of America that the  
2 foregoing facts are true and correct. Executed this 28th day of June, 2019 in Boston,  
3 Massachusetts.

4  
5 /s/ Joshua D. Lustig

6 Joshua D. Lustig  
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